

## CLAIMS

What is claimed is:

- 1 A method of executing an operation on a set of objects, the method comprising the steps of:
  - 2 detecting that a statement contains
    - 3 an operation identifier that specifies an operation,
    - 4 pattern matching criteria, and
    - 5 an attribute identifier that identifies an attribute; and
  - 6 executing said statement by
    - 7 identifying all objects associated with identifiers that satisfy said pattern matching criteria, and
    - 8 performing said operation on said attribute of each of said objects that satisfy
    - 9 said pattern matching criteria.

The method of Claim 1, wherein said statement includes a first string of characters that contains at least one wild card character and that specifies said pattern matching criteria.

- 1    3. The method of Claim 2, wherein said first string is part of a second string of characters, wherein said second string of characters includes said attribute identifier and is in a format that conforms to object-dot notation.

1 4. The method of Claim 1, wherein the step of identifying includes identifying a set of  
2 graphical components associated with identifiers that satisfy said pattern matching  
3 criteria, and said step of performing includes performing said operation on said  
4 attribute of each graphical component in said set of graphical components.

~~1 5.~~  
~~1 2.~~  
The method of Claim 1, wherein said statement is written in a scripting language and  
the step of detecting is performed by a script processor.

1 6. The method of Claim 5, the script processor is part of a CAD system and the step of  
2 identifying is performed by identifying objects within said CAD system that are  
3 associated with an identifier that matches said pattern matching criteria.

1 7. The method of Claim 1, wherein the step of detecting that a statement contains pattern  
2 matching criteria includes detecting that the statement contains pattern matching  
3 criteria for a hierarchical identifier.

~~1 8.~~  
~~1 2.~~  
~~1 3.~~  
A method of executing an operation on collections of objects, the method comprising  
the steps of:  
detecting that a statement contains  
an operation identifier that specifies said operation,  
an identifier that is associated with a collection of objects, and  
an attribute identifier that identifies an attribute of a member object of said  
collection of objects; and

8 executing said statement by  
9 identifying member objects of said collection of objects, and  
10 performing said operation on said attribute of each of said identified member  
11 objects.

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The method of Claim 8, wherein said collection of objects is an array.

1 10. The method of Claim 8, wherein said collection of objects includes all instances of a  
2 native type of graphical components managed by a CAD system.

1 11. The method of Claim 10, wherein said native type is a map type of graphical  
2 components, wherein a map type defines a surface.

1 12. A computer-readable medium carrying one or more sequences of one or more  
2 instructions for executing an operation on a set of objects, the one or more sequences  
3 of one or more instructions including instructions which, when executed by one or  
4 more processors, cause the one or more processors to perform the steps of:  
5 detecting that a statement contains  
6 an operation identifier that specifies an operation,  
7 pattern matching criteria, and  
8 an attribute identifier that identifies an attribute; and  
9 executing said statement by  
10 identifying all objects associated with identifiers that satisfy said pattern  
11 matching criteria, and

12 performing said operation on said attribute of each of said objects that satisfy  
13 said pattern matching criteria.

1    13. The computer-readable medium of Claim 12, wherein said statement includes a first  
2       string of characters that contains at least one wild card character and that specifies  
3       said pattern matching criteria.

1 14. The computer-readable medium of Claim 13, wherein said first string is part of a  
2 second string of characters, wherein said second string of characters includes said  
3 attribute identifier and is in a format that conforms to object-dot notation.

1    15. The computer-readable medium of Claim 12, wherein the step of identifying includes  
2       identifying a set of graphical components associated with identifiers that satisfy said  
3       pattern matching criteria, and said step of performing includes performing said  
4       operation on said attribute of each graphical component in said set of graphical  
5       components.

16. The computer-readable medium of Claim 12, wherein said statement is written in a  
scripting language and the step of detecting is performed by a script processor.

1    17. The computer-readable medium of Claim 16, the script processor is part of a CAD  
2       system and the step of identifying is performed by identifying objects within said  
3       CAD system that are associated with an identifier that matches said pattern matching  
4       criteria.

1    18. A computer-readable medium carrying one or more sequences of one or more  
2        instructions for executing an operation on collections of objects, the one or more  
3        sequences of one or more instructions including instructions which, when executed by  
4        one or more processors, cause the one or more processors to perform the steps of:  
5            detecting that a statement contains  
6                an operation identifier that specifies said operation,  
7                an identifier that is associated with a collection of objects, and  
8                an attribute identifier that identifies an attribute of a member object of said  
9                collection of objects; and  
10            executing said statement by  
11                identifying member objects of said collection of objects, and  
12                performing said operation on said attribute of each of said identified member  
13                objects.

1    19. The computer-readable medium of Claim 18, wherein said collection of objects is an  
2        array.

1    20. The computer-readable medium of Claim 18, wherein said collection of objects  
2        includes all instances of a native type of graphical components managed by a CAD  
3        system.

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